

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2002-076218

(43)Date of publication of application : 15.03.2002

(51)Int.CI. H01L 23/373  
H05K 7/20

(21)Application number : 2000- 252838 (71)Applicant : FURUKAWA ELECTRIC CO LTD:THE

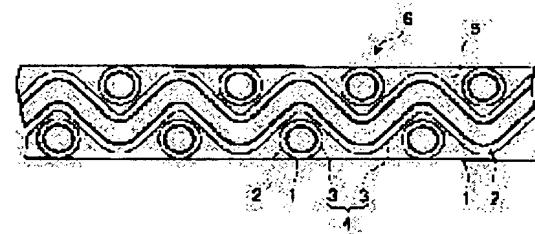
(22)Date of filing : 23.08.2000 (72)Inventor : FUJIWARA HIDEMICHI

## (54) HEAT-TRANSFERRING SHEET

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide a heat-transferring sheet that has improved thermal conductivity, appropriately adheres to a semiconductor device and a heat sink, and prevents ground leakage, between the semiconductor device and the heat sink.

**SOLUTION:** In the sheet 6 having improved thermal conductivity, an elastic material 5 is combined with a net (enamel wire net) 4, where an enamel wire 3 whose wire material 1 with improved thermal conductivity is covered with an insulating layer 2, is knitted, and the enamel with net 4 is partially exposed to both front and rear surfaces. Since the front and rear surfaces are made of an elastic material 5 and the enamel wire 3, the heat-transferring sheet appropriately adheres to a semiconductor device and the heat sink. Also, since the enamel wire 3, having the wire material 1 with improved thermal conductivity inside, is distributed and combined in a net, while its one portion is exposed to the front and rear surfaces, the thermal conductivity is superior. Since the wire material 1 with improved thermal conductivity is covered with an insulating layer 2, it will not come into contact with the semiconductor device and heat sink, thus preventing ground leakage from the semiconductor device to the heat sink.



### LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application  
other than the examiner's decision of  
rejection or application converted  
registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's  
decision of rejection]

[Date of requesting appeal against  
examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office

(19)日本国特許庁 (JP)

## (12) 公開特許公報 (A)

(11)特許出願  
特願2002-  
(P2002-)

(43)公開日 平成14年3月

(51)Int.Cl.

H 01 L 23/373  
H 05 K 7/20

識別記号

F I

H 05 K 7/20  
H 01 L 23/36F  
M

審査請求 未請求 請求項の数 9 (

(21)出願番号

特願2000-252838(P2000-252838)

(71)出願人 000005290

古河電気工業株式会社  
東京都千代田区丸の内2丁

(22)出願日

平成12年8月23日(2000.8.23)

(72)発明者 藤原 英道

東京都千代田区丸の内2丁  
河電気工業株式会社内Fターム(参考) 5E322 F404 F406  
5F036 AA01 BB21 BD0

(54)【発明の名称】 伝熱性シート

(57)【要約】

【課題】 热伝導性に優れ、半導体装置およびヒートシンクと良好に密着し、かつ半導体装置とヒートシンク間で漏電が生じない熱伝導性シートを提供する。

【解決手段】 热良導性線材1を絶縁層2で被覆したエナメル線3を編み合わせた網(エナメル線網)4に弹性材5が複合され、エナメル線網4の一部が裏裏面に露出している伝熱性シート6。

【効果】 裏裏面が弹性材5およびエナメル線3からなるため、半導体装置およびヒートシンクと良好に密着する。内部に熱良導性線材1を有するエナメル線3が、その一部を裏裏面に露出させて網状に分布し複合されているため熱伝導性に優れる。前記熱良導性線材1は絶縁層

